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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,687	10/14/2003	Xianhai Chen	014116-81.00US	7052
20350	7590	04/04/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			ROSSI, JESSICA	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/685,687

Applicant(s)

CHEN ET AL.

Examiner

Jessica L. Rossi

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/20/06, RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***RCE***

1. The request filed on 10/685,687 for a RCE under 37 CFR 1.114 based on parent Application No. 10/685,687 is acceptable and a RCE has been established. An action on the RCE follows.

***Response to Amendment***

2. This action is in response to the amendment filed on 3/20/06.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3-8, there is no antecedent basis for “the laminating step” and “the lamination” since “laminating” was deleted from claim 1. It is suggested to amend claims 3-8 accordingly.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holman et al. (US 6831769, of record) in view of Bryan (US 6151153, of record) and further in view of the

Art Unit: 1733

collective teachings of Bryan, Zuchowski (US 6483643, of record) and Haas et al. (US 5153759, of record).

With respect to claim 1, Holman is directed to a method for making an electro-optical sensor by providing a transparent substrate 110 comprising an optically smooth top surface and bottom surface (column 12, lines 39-41 and 47-49), coating the top surface of the glass with a transparent electrode 120 (column 12, lines 41 and 55-59), applying a composition of electro-optic sensor material 130 as a layer over the electrode without using a transfer substrate (note Holman teachings coating the sensor material directly onto the electrode – column 12, lines 41-42 and 60-62; column 3, lines 6-36), applying a thin layer of adhesive 180 over the layer of electro-optic sensor material (note reference teachings coating the adhesive directly onto the sensor material – column 13, lines 9-20), and applying/laminating a film (not shown in Figures – Holman refers to this film as a ‘backplane’) to the adhesive layer such that the film is substantially optically smooth against the sensor material (column 13, lines 24-27; column 4, lines 3-31).

It is unclear as to whether the reference teaches the transparent substrate being glass and the film being a pellicle film bearing a dielectric mirror layer.

It is known in the art to make an electro-optical sensor by applying/laminating a pellicle as a film 26/230 bearing a dielectric mirror layer 232 onto an electro-optic sensor material, which has already been applied over an electrode that was coated onto a glass substrate, via an adhesive layer that has already been applied over the sensor material located on the electrode, as taught by Bryan (Figures 1-2; column 3, line 54 – column 4, line 66; column 5, lines 13-25; column 7,

Art Unit: 1733

lines 60-62; column 9, lines 17-30). Bryan teaches the pellicle serving as a protective layer for the electro-optic sensor material (column 4, lines 36-38).

Since Holman is not concerned with a particular film for the backplane, as long as it serves to protect the electro-optic sensor material (column 4, lines 8-13), and one reading the reference as a whole would have readily appreciated that Holman is not concerned with forming a particular electro-optical sensor, it would have been obvious to one of ordinary skill to use a pellicle as a film bearing a dielectric mirror layer for the protective film of Holman because such is known in the art, as taught by Bryan, where such a film satisfies Holman's concern with protecting the sensor material while also imparting certain desirable characteristics to the electro-optical sensor that allow for its use as a particular type of electro-optical sensor.

Furthermore, since Holman only states that transparent plastic is "typically" used for the transparent substrate and is therefore not concerned with a particular transparent substrate for the electro-optical sensor (column 12, lines 47-49), it would have been obvious to use glass as an alternative to plastic because such is known in the electro-optical device art, as taught by the collective teachings of Bryan (column 4, lines 57-62), Zuchowski (Figure 8; column 5, lines 59-60; column 6, lines 30-34; column 8, lines 29-34; column 12, lines 11-14) and Haas (Figure; column 4, line 62 – column 5, line 2; column 5, line 58 – column 6, line 15), where glass serves as a more durable support substrate.

Regarding claim 2, Holman teaches the sensor material being PDLC (column 3, lines 34-36).

Regarding claim 3, Holman teaches the applying/laminating step being performed by vacuum lamination (column 4, lines 24-31).

Art Unit: 1733

Regarding claims 4-5, selection of a particular vacuum magnitude would have been within purview of the skilled artisan.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holman, Bryan, and the collective teachings of Bryan, Zuchowski and Haas as applied to claim 2 above, and further in view of Sadovnik et al. (US 5764317, of record).

Regarding claim 2, if it is not taken that Holman teaches the PDLC sensor material being applied over the electrode by the same methods used to apply the other sensor materials disclosed in the reference (without using a transfer substrate, i.e. coating it directly onto the electrode – column 12, lines 41-42 and 60-62; column 3, lines 6-36), it would have been obvious to apply the PDLC of Holman in the same manner as the other sensor materials because it is known in the electro-optical device art to coat a PDLC sensor material directly onto an electrode layer, which was directly coated onto a glass substrate, as taught by Haas (Figure 7; column 7, lines 38-41; column 8, lines 51-53; column 9, lines 31-33; column 10, lines 45-50).

8. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holman, Bryan, and the collective teachings of Bryan, Zuchowski and Haas as applied to claims 1 and 3 above, and further in view of Nakamura et al. (US 6346164, of record).

Regarding claims 6-7, it would have been obvious to one of ordinary skill to have the pellicle film progressively engage the adhesive layer during the vacuum laminating step such that the pellicle and adhesive are disposed at an angle relative to each other because it is known to dispose two layers at an angle relative to each other when vacuum laminating the same, as taught by Nakamura (Figure 2; column 2, lines 30-45), wherein such disposition aids in the removal of air from between the layers.

Art Unit: 1733

Regarding claim 8, selection of a particular vacuum magnitude would have been within purview of the skilled artisan.

***Response to Arguments***

9. Applicant's arguments filed 3/20/06 have been fully considered but they are not persuasive.

10. On p. 6 of the remarks, Applicant argues that Bryan applies the sensor material to the electrode via a transfer substrate and therefore teaches away from the claimed invention.

The examiner appreciates that Bryan teaches applying the electro-optic sensor material using a transfer substrate but would like to point out that Bryan is only being used in the present office action to show it being known in the electro-optical sensor art 1) to apply a pellicle as a film bearing a dielectric mirror layer onto an electro-optic sensor material via an adhesive layer that has already been applied over the sensor material and 2) to use glass as the transparent support substrate upon which an electrode, an electro-optic sensor material, an adhesive and a pellicle film layer is applied.

11. On p. 6 of the remarks, Applicant argues that Zuchowski is not concerned with and is silent on fabricating an electro-optical sensor.

The examiner invites Applicant to carefully reread the Zuchowski reference and note the similarities between the disclosed device (transparent substrate, electrode, PDLC layer, mirror layer) and that of Holman and the present invention. Regardless, the examiner would like to point out that Zuchowski is only being used in the present office action to show it being known in the electro-optical device art to use glass as the transparent support substrate.

Art Unit: 1733

12. On p. 7 of the remarks, Applicant argues that Haas is not concerned with and is silent on fabricating an electro-optical sensor.

The examiner invites Applicant to carefully reread the Haas reference and note the similarities between the disclosed device (transparent substrate, electrode, PDLC layer, mirror layer) and that of Holman and the present invention. Regardless, the examiner would like to point out that Haas is only being used in the present office action to show it being known in the electro-optical device art to use glass as an alternative to plastic for the transparent support substrate.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **571-272-1223**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**JESSICA ROSSI**  
**PRIMARY EXAMINER**

*Jessica Rossi*